



Bat action - Action plan for three threatened bat species in Flanders

LIFE06 NAT/B/000095



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Project description:

Background

Six bat species mentioned in the Annex II list of the Habitat Directive are found in the Flanders, Belgium. Three of these species are listed as seriously threatened in the Red List of Mammals in Flanders: the pond bat (*Myotis dasycneme*), the notch-eared bat (*Myotis emarginatus*) and the Bechstein's bat (*Myotis bechsteini*). The decline of these bat populations is caused by the destruction of their most important habitats. Bats occupy different locations in summer and winter. A management plan to protect bat populations must take into account the different sites that bats occupy.

The notch-eared bat is a very rare species: Flanders is its most northern European location. It can be found in open woods and ancient parklands. Summer sites include roof spaces, while hibernation sites are fortresses, marl caves and ice-cellars.

Belgium, however, represents the most southern location of the pond bat. During the summer they hunt over large water surfaces, such as canals and ponds with good water quality. Summer and winter roosts are similar to the notch-eared bat.

Finally, the Bechstein's bat, a typical tree-roosting species, is one of the most unknown and vulnerable bat species in Europe. During summer and winter they have been found exclusively in Flanders in the marl caves of Zussen and the Zoniën Forest around Brussels.

Objectives

The aim of the project was to achieve a substantial increase in bat numbers, with emphasis on the notch-eared, the pond and Bechstein's bats. Important habitats for bats, such as fortresses, would be acquired and special attention would be given to the breeding roosts, hibernating grounds and hunting habitats. A detailed management plan was intended to be drawn up based on the roost requirements of each site.

Strategic objects, such as fortresses near Antwerp and marl caves in Limburg, were chosen as the main targets for conservation. These strategic sites are linked by large water bodies that are used by the bats for long-distance migration. Furthermore, other elements located in between these objects would be protected and made suitable for bats.

An innovative aspect of the project, which may serve as an example for habitat improvement for bat species in a dense urban region, is the placing of specially designed bat roosts under bridges along main migration routes. The public attitude to all bats species is largely negative, and a suitable, targeted educational campaign based on habitat preservation and improvement was planned. The aim of these awareness campaigns would be to generate positive support for bats among the public and to highlight their conservation needs.

Results

The 'BatAction' project's main focus was to optimise the overall conditions of a series of major hibernation sites, more specifically the belt of brick fortresses near the city of Antwerp: Fortress Steendorp, Fortress Duffel, Fortress Walem and Fortress Kessel; and of the lime cave systems in the valley of the Meuse in the province of Limburg. The measures carried out in the fortresses consisted, among others, of preventing the buildings going into further dilapidation. Moreover, the environmental and climatic conditions of the inner fortress areas were improved for bats hibernation, for example, by closing several doorways to smaller rooms in the fortresses, using a door with bat openings or a brick wall with an open space allowing the bats to pass, closing shooting holes and outer doors. In addition, doors were constructed to avoid disturbance of the bats during hibernation, and fences were erected to keep out unwanted visitors.

Initial monitoring of the populations at Fortress Walem, demonstrated the effectiveness of these measures. Although at this stage (2012) the same overall number of hibernating bats was found in the fortress as in previous years, 70% of the bats were now found hibernating in the 'protected' part of the compound, whereas before the measures the bats were found scattered all over the compound. As a result, hibernating bat numbers are expected to rise over the coming years. In addition to the measures already carried out, hibernating conditions in parts of the fortress will be improved even more by inserting doors and separation walls at strategic places. By doing so, draught will be reduced and some temperature conditions will be slightly increased.

In several fortresses, rooms were prepared to host a permanent exhibition on the history and present use of the fortresses. The location of these rooms was

chosen so as not to interfere with bat hibernation. In the rooms open to the public, information is given on the history of the building, on the flora and fauna found, and on the importance of the site for the hibernation of bats. The target audience will consist mainly of schools. Visitors are mostly welcome outside the hibernation periods and when accompanied by an official guide.

Meanwhile, on the surface of each lime cave system, at Lacroix and Rosenberg, just over 7 hectare of land was purchased by the Agency for Nature and Forest. Some of the older and fully closed entrances to the cave systems were replaced by new doors, designed to be bat friendly as well as being resistant to break ins. The After-LIFE development of a landscape combining calcareous grassland with forest patches aims to create the best habitat conditions for the Bechstein's bat. Furthermore, 15 bat roosting boxes were attached under bridges along waterways. Several of these boxes were designed to fit the specific on-site conditions.

Finally, several leaflets and information brochures for different audiences were produced during the course of the LI project. A travelling exhibition on bats proved to be a major success, particularly thanks to its accompanying bat game. Other communication activities included the distribution of more than 250 signs, indicating the presence of bats in houses and other objects belonging to private owners or public authorities. Information boards on the project activities were erected at each site, and a seminar on light pollution for public authorities and all relevant stakeholders was held. Moreover, an information line for the wider audience, where members of the public can report live or wounded bats, was developed and is now fully functioning.

Annual 'Night of the Bat' events held at more than 70 locations reached hundreds of people. These nights are in line with the "Eurobats" UNEP Agreement for the protection of European bat species (www.eurobats.org).

An important aspect was its collaboration with all stakeholders. In the case of the fortresses, close consultations were held with the historic-cultural stakeholders, while similar efforts were made at the caves of the Meuse valley. The cultural heritage aspects of these caves are encouraged but in such a way as to not to cause any disturbance to hibernating bat populations. Additionally, the redesign of landscape features and the inclusion of small landscape elements nearby the cave entrances will enhance the attractiveness of the sites to hibernating bat populations.

Further information on the project can be found in the project's layman report and After-LIFE Conservation Plan (see "Read more" section).

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Environmental issues addressed:

Themes

Species - Mammals

Biodiversity issues - Urban biodiversity

Keywords

protected area, public awareness campaign, urban area, population dynamics

Target EU Legislation

- Nature protection and Biodiversity
- Directive 92/43 - Conservation of natural habitats and of wild fauna and flora- Habitats Directiv ...

Target species

Myotis bechsteinii Myotis dasycneme Myotis emarginatus

Natura 2000 sites

SCIBE2100045 Historische fortengordels van Antwerpen als vleermuizenhabitat.
SCIBE2200036 Plateau van Caestert met hellingbossen en mergelgrotten.

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Beneficiaries:

Coordinator	Agentschap voor Natuur en Bos (ANB)
Type of organisation	Regional authority
Description	Agentschap voor Natuur en Bos (ANB) was created by the merger of AMINAL Natuur (Nature) and AMINAL Bos en Groen (Forest and Green spaces) in April 2006. It is part of the Flemish Ministry of Environment, Nature and Energy and supports the sustainable management and development of forest and green spaces in Flanders – in city areas and in the countryside.
Partners	Vleermuizenwerkgroep Natuurpunt, Belgium Natuurpunt Beheer, Belgium

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Administrative data:

Project reference LIFE06 NAT/B/000095

Duration	01-AUG-2006 to 31-DEC -2011
Total budget	1,892,271.00 €
EU contribution	946,136.00 €
Project location	Vlaams Gewest(België - Belgique)

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Read more:

Project web site	Project's website
Publication: After-LIFE Conservation Plan	Title: After-LIFE Conservation Plan Year: 2012 No of pages: 25
Publication: Layman report	Title: Layman report Year: 2012 Editor: Dirk Bogaert, Directeur Communicatie ANB No of pages: 15
Publication: Technical report	Title: Project's Final technical report Year: 2012 No of pages: 89

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